1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

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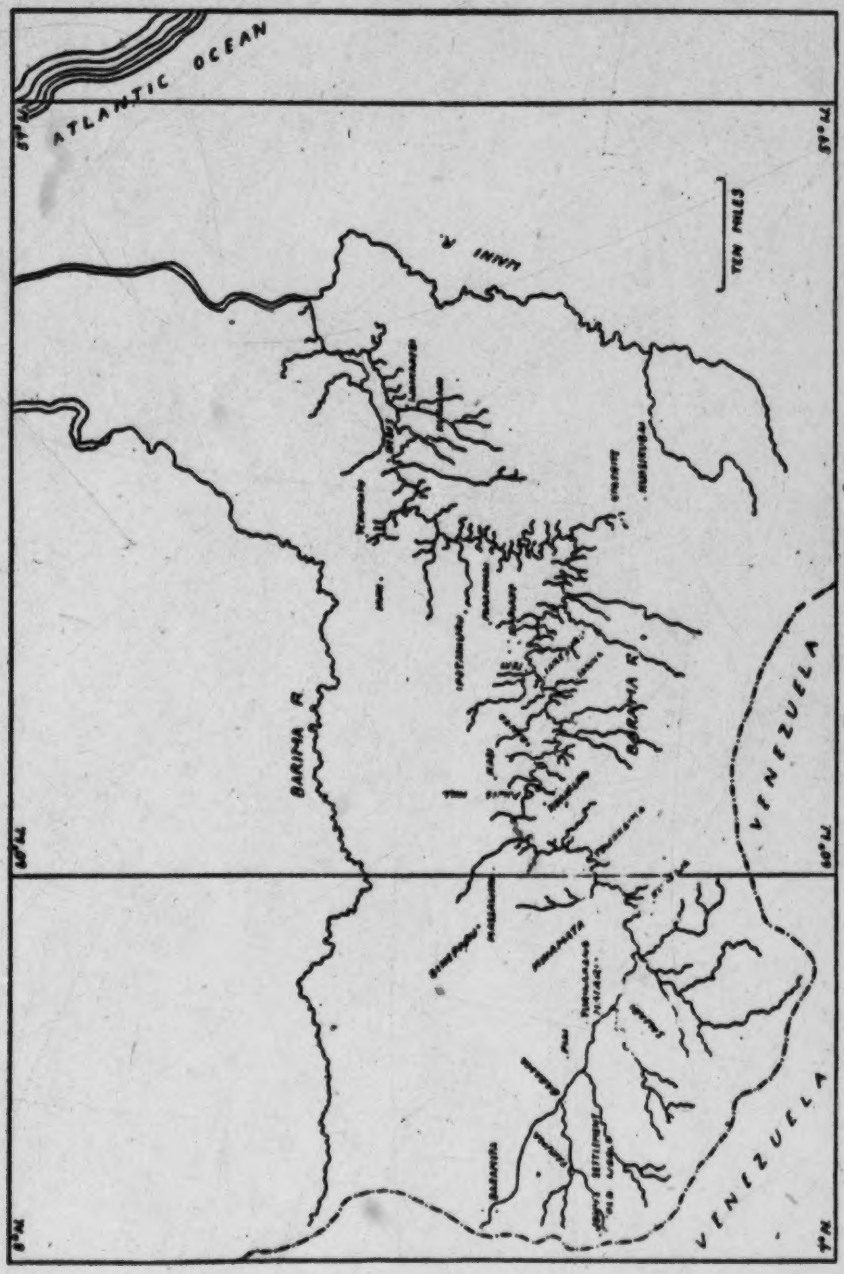

FIGURE 1

Map of the Barama River showing all its important tributaries. Carib settlements are located and marked.

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

304 789 made from the bina plant or animal is rubbed, as described in the section on religion. When these incisions heal, a series of short transverse blue lines remains.

SHELTERS AND THEIR FURNITURE

361 THE majority of settlements or villages are located at some distance from the river side. The only exceptions to this rule are those of Teki and Powis Hill, both of which were established on the river bank through the influence of gold prospectors who wished Indian labor in the vicinity of their operations, and Turingbang and Baramita on the upper reaches of the river, where it is not navigable. Other settlements range in distance from the river from half a mile, as in the case of Kariako, to an estimated fifteen miles, as in the case of Huri.

Although defense was possibly the major consideration leading to a secluded location of a village in former times, the requirements of the hunting and agricultural activities of the natives seem to be most important at present. Successful hunting requires a wide range of virgin forest on all sides, a territory in which the hunters are not handicapped by competition from neighboring villagers or passers-by on the river. Furthermore, it is the practice to locate [312] cassava fields on hills or slopes in order to facilitate drainage of the soil. Suitable facilities for natural drainage are most often found at some distance from the river.

The village is always located on or near the banks of a creek which provides the water used by the people. Access to the river is afforded by trails and paths through the jungle. (See section on the settlement of Sawari.)

342 361 In so far as a Carib orients his house at all, he endeavors to place it so that the long axis runs north and south, an arrangement which prevents the sunlight from entering the gable ends. This type of orientation, while frequent, is not universal, and if the house happens to be protected by the shade of trees, little attention is given to the matter. Other considerations affecting the choice of the site are privacy combined with ready accessibility to neighbors, convenience to water supply, and nearness to the field. Change of residence is not an uncommon thing in this region, due to such causes as the necessity of locating new fields

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

and hunting grounds, or personal and social disagreements, so that the building of a house is looked upon as a chore which must be repeated several times during one's career. A man, if one may judge by the histories of the old men whom I knew, may build from three to a dozen houses during his lifetime.

Before discussing the permanent residences which are located in settlements or villages, it may be well to mention the types of temporary shelter in the building of which the Carib woodsmen are so adept. As stated in our discussion of hunting, a man is sometimes away from home for several days, engaged in the chase. In other cases long trips overland or by river to neighboring settlements or trading posts necessitate the passing of nights in the jungle. Just as every man is a competent woodsman, knowing the practical uses to which any of the jungle plants can be put and the peculiarities of the animals which furnish so large a part of his food supply, so he is also well acquainted, by the time he reaches man's status, with many ingenious methods of making himself comfortable in any conditions which he may have to face. Other aspects of woodsmanship will be described in our chapter on transportation and woodcraft. But at this point we may say that a man traveling in the jungle always carries at least two accessories, his cutlass and his hammock. With these he can make himself reasonably comfortable for a night almost anywhere. The cutlass is carried in the hand, and the hammock is rolled into a small ball which is suspended down the back by a piece of bush rope around the neck, or is packed into a corner of the walisha (carrying basket).

If the night gives promise of being clear, or if the traveler is in a great hurry, the only arrangements made for sleeping are the cutting of two poles with sharpened ends, which are forced into the ground at a distance of perhaps six feet from each other. To these poles the hammock ropes are attached. The poles themselves lean at obtuse angles away from each other, the better to withstand the strain of the hammock. This method of passing the night is designated in pidgin English as "sleep in bush corner."

Rain, however, is the constant visitant of all travelers in the bush, and it is exceedingly difficult to say with certainty that a sky which at evening is studded with stars will not be pouring water long before morning. Consequently, whenever practical, some provision is made for shelter from rain. The simplest form of

1: Gillin 5 (1932-33) 1936 SR9 Carib SR9

by Roth,[1] although the design in the weaving is confined to square and rectangular figures produced by twilled technique. They are used for storing clothing and personal effects, and are usually kept closed by a cord which is tied securely around both halves.

A variety of quakes, or general utility baskets (kuru kuru), are in use. They are practically all open wickerwork of the hexagonal pattern, without decoration (Plate 22, *a*). They all have hexagon bases, and the details of their construction may be obtained in Roth.[2] Occasionally these baskets are provided with handles. They are for the most part used for storing cassava and other vegetable products.

No other basketry or plaited articles than those described above were observed on the Barama. Fish traps and basketry water bottles, found in other parts of the colony, are not in use here.

Feather-working. This is not one of the arts of the Barama Caribs. Feathers are used on arrows, they are stuck in the hair occasionally as decoration, tufts of feathers may be used in making decorative pendants, and tufts of white-powis down are sometimes stuck with honey to the forehead as decoration, but elaborate headdresses, armlets, and so forth, made of feathers, are not to be found in this region.

TRANSPORTATION

THE Caribs have no beasts of burden or wheeled vehicles, so that all transportation depends in the last analysis upon the strength and endurance of the human body.

Land Transport. On land all goods to be transported must be carried on human backs. Radiating from each settlement are a number of trails leading off into the bush, which are followed by men when hunting. Below the falls at Towakaima, the connection between different settlements is usually made by river. The village may be located from one to fifteen miles back from the river by trail, but to reach a neighboring settlement, it is necessary to take the path to the riverside and proceed by canoe to the landing place of the settlement which is to be visited. The three Kariako settlements and Parapimai are connected by trail, as are

[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 345.
[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 322, ff.

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

487 Towakaima and Massawini, but these are exceptions on the lower
361 Barama. Usually, however, each village has more than one trail to the river, perhaps a survival of a more warlike period when alternative means of escape were required in times of attack. On the upper Barama, where the river is less navigable than below the falls, all the settlements are connected by trail, and most of the traveling is done overland.

487 A trail is, after all, only a convenience which is not absolutely
[823] necessary to a Carib and, when traveling lightly loaded, a man does not hesitate to "walk the raw bush" if there is a possibility thereby of saving time. And it is as a result of these raw bush walks that most of the trails are established. The ability of a native to find his way in the unmarked forest is truly astounding to a foreigner, who, until he has become accustomed to jungle conditions, loses all sense of direction once he finds himself surrounded by trees and thick undergrowth which frequently shut out even a view of the sun's position. The river is, however, the lode star of the traveling Carib and, as long as he knows his position in reference to it, he does not lose his bearings. It is believed that moss on the tree trunks invariably grows on the side of the tree which is nearest the river, and I have had this fact pointed out to me many times. Also, men are familiar with the general position of the creeks which flow into the river along the course which they are taking, even if they have never seen the creeks themselves; so that once a creek is reached, one usually knows one's approximate whereabouts. If a man is lost he will keep on until he reaches the next creek, follow it to the river, and then follow the river to a point which is familiar. As a man walks the bush, however, he takes precautions to mark his trail so that he may back-track, if necessary. As has been said before, a cutlass is always carried by individuals when in the bush. As one goes along one hacks the tops of the saplings at practically every step, so that the tops fall over in the direction which one is taking. With the left hand, twigs and saplings are broken and bent over in the same manner. A mutilation of this kind is practically never produced by natural causes, so that a bent or hacked sapling top immediately announces to a traveller that a human being has passed there. Also, the trunks of the trees are slashed with the cutlass as one goes along, leaving gashes in the bark which can be easily identified as trail blazes.

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

621 162 **External Contacts of the Settlement.** The Sawari settlement, with a population of twenty-six adults and twenty-one children, includes three residential clearings and several associated agricultural fields or gardens. As can be seen from Figure 9, a nearly straight line running from northeast to southwest can be drawn through the three clearings where the people live. The clearing occupied by John Miller, the headman of the whole settlement, lies farthest to the southwest. About a half-mile northeastward, separated by intervening jungle, is the house clearing of Edwin. And perhaps three-quarters of a mile northeastward of Edwin's house lies the clearing for the houses of John Cook, Henry Daniel, John and Daniel. This arrangement of the several divisions of the community is reflected in the social positions of the members affected thereby.

103 As is the case with all Carib settlements on the Barama, Sawari takes its name from the creek where the people get their water supply. The Sawari Creek, so named from the numerous sawari-nut trees (*Caryocar Pekea tuberculosa*) which grow along its banks, flows south of Miller's clearing, passes east of Edwin's clearing, and empties into the Barama at a point almost directly north of the latter.

361 Outside contact at the time of my appearance at Sawari was maintained with the settlements of Haiari and Kwamata across the river, and with Kurewa, which lies about midway between [487] Sawari and Towakaima itself. (See Figure 1.) An old trail running southwestward to the higher settlements of the upper Barama had not been used for several years, and the Sawari Caribs were completely out of touch with those farther up the river.

484 This section of the country is unmapped, and reliable estimates of linear distances are impossible without instruments because of the meandering courses which both the jungle trails and the streams pursue. Consequently, distances are usually spoken of by the Indians in terms of the length of time required for a reasonably swift man to cover them. On this basis Haiari is three hours [361] distant, but men travelling with loads usually take at least five hours or half a day. Kwamata is about six hours. Kurewa is about twelve hours, a long day away.

177 361 The source of such European influence as exists in this region is Towakaima. On the left bank of the river, at a distance of about

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

a mile and a half below the Great Falls, is the "shop," or trading post, owned by Chee-a-Fat, a Chinese man of business whose base of operations is at Aranka on the Barama River. Aranka is twenty-nine and three-fourths miles distant from Towakaima via the now dilapidated government trail, which was built to connect the two rivers during the hey-dey of the gold rush. At the time of my study, the shop at Towakaima was in charge of one James Cook, a negro, and it boasted a very small and depleted stock of staple goods. The other "foreign" resident of Towakaima is Mr. H. Pestano who lives on his land grant of five acres, leased from the government. Mr. Pestano is a literate Portuguese Creole, formerly residing on the Berbice Coast. Mrs. Pestano, the daughter of a negro prospector and a Carib woman, is acquainted with the contemporary cultures of both of her ancestral stocks. Both the Pestanos are thoroughly versed in the ways of the Caribs and well liked by them. Many of Mrs. Pestano's relatives live in the Barama settlements. To the Pestanos I owe my thanks for valuable assistance in my efforts to understand the Carib culture.

Towakaima, in the days of the gold rush, was the station of a government warden, and the ruins of his house and office now lie, barely discernible among the ravages of wood ants and tropical decay, in a rank second growth of jungle near Mr. Pestano's present wattle and thatch house. During the period of mining activity, ended about 1912, Towakaima was apparently a vigorous outpost of civilization. I am told that in highwater Sproston's launch made regular trips up the Barama to this point, and that the now decrepit trail to Aranka, on the more easily navigable Barama, was fit for wagon traffic. About 1910, we hear, the firm of Farnum and Smyth had a shop for a period of a year on the Anamu, and regularly hauled tent boats over the falls by means of rollers and rope and tackle. These facts are mentioned in order to give a complete picture of the possible external influences which the inhabitants of Sawari may have felt. Even during the period of Towakaima's efflorescence, however, Sawari appears to have remained off the beaten path, still a day's walk through the bush beyond Farnum and Smyth's shop. And, so far as the Indians and other informants could say, white men had never visited Sawari previous to my appearance there, and it has been relatively free from outside contact. Nevertheless,

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

621 Edwin's clearing is shown in Figure 11. It embraces three buildings, which are numbered on the Chart.

162 342 Adjoining Edwin's clearing to the north and northeast lie his fields. The area about his house, which is clear and unplanted, is roughly elliptical in shape and measures one hundred and thirty feet by ninety-five feet.

EDWIN'S CLEARING

Building	Use	Adult Occupants Male	Adult Occupants Female	Child Occupants Male	Child Occupants Female
14	Drink house sheltering liquor trough				
15	Small benab used as kitchen and as sleeping quarters for guests				
16	Residence	Edwin	Lulu	boy	girl girl girl

John Cook's is shown in Figure 12. It is the largest single clearing in the settlement, measuring nine hundred and fifty by six hundred and eighty feet. It is entirely planted with cassava and other crops, except for small areas around the seven buildings.

Sawari thus comprises a population of forty-seven individuals, of which twenty-six are adults and twenty-one children. Of the whole group, twenty are males, and twenty-seven females. There are thirteen men and seven boys; fourteen women and thirteen girls.

361 162 To my knowledge, there were in the winter of 1932–33 a total of thirty-three Carib settlements on the Barama (Fig. 1). Of these I visited twenty-seven. According to my estimates, they range in size of population from seven (Waikarabi) to about seventy (Aranka at full strength).

621 **Consanguineal and Affilial Relationships** The settlement of Sawari is typical of the Carib villages on the Barama except for

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

773 headman therefore plugged his anus with mud. The Indians be-
539 lieve to this day that the sloth has no anus.

14. TRADITION CONCERNING ANTECEDENTS OF THE BARAMA CARIBS

173 A group of people were living a long time ago in the Cuyuni head, and for some reason were fighting among themselves continuously, killing people at an astonishing rate. Finally a mother and daughter and a father and son escaped, the males coming first, and made their way north to the Barama head. Here they inter-married, and from the head of the river the Caribs spread down toward the mouth.

This theory of origin is supposed to be confirmed by the fact that David (informant) had a relative, his father's brother-in-law, who had journeyed to the Cuyuni head and there seen what he considered miraculous evidence of that great historic period of fighting: tree stumps of rock, and mountains which were white as cotton. When asked in what way these phenomena confirmed the theory, David replied that they were so unusual that they showed something important had happened there.

174 (The spread of the Caribs from the Barama head rather than vice versa seems to agree with their present distribution, their absence below the mouth of the river and along the coast, and also with Schomburck's observations, that in 1842 the Caribs occupied the upper part of the river and the Akawais the lower.)[1]

PHYSICAL ANTHROPOLOGY

162 THE data concerning the physical anthropology of the Barama
● 361 Caribs were collected as impartially as possible, with the object of presenting a fair description of the bodily features of the Indian population as it exists at the present time. According to the best estimates the total adult Carib population of the Barama numbers between 275 and 300 individuals. It was not without considerable difficulty that 206 subjects (104 males, 102 females) were finally measured, a difficulty which was due not to the personal objections of the subjects, which were easily overcome, but to the fact that the population is distributed among thirty-three settlements

[1] See Schomburgk, 1922-23, *Travels in British Guiana*, Vol. I, Chap. 6, Vol. II, Chap. 2.

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

throughout an area of about four thousand square miles. All but eight of the known settlements were visited in person, and occasional individuals residing in the unvisited settlements were measured elsewhere. Owing to the smallness of the population and the difficulty of collecting data, it was deemed inadvisable to confine the selection of subjects to those showing only "pure Indian" traits. If such a selection had been followed, it would have been impossible to collect a sample of sufficient statistical size to provide a reliable picture of the present physical make-up of the population.[1]

Subjects were required to be recognized members of a Carib settlement on the Barama and to have an estimated age of at least eighteen in the case of females, and of at least twenty-one in the case of males. Cripples, defectives, and individuals who, even though they occupied adult social positions, appeared to be under the age limits, were eliminated. The amount of possible non-Indian blood in the sample thus obtained is indicated by the fact that, of the group of 104 males only 20 possessed the combination of straight, coarse, black hair. Of the 102 females only 14 possessed these characteristics. In sorting for individuals possessing the combination merely of straight, black hair, 28 out of 104 males in the sample appeared, and 33 out of a total of 102 females. Thus, if the possession of straight, black hair be assumed as the minimum criterion of racial purity, 27 percent of the male population and 32 percent of the female population were racially pure in this crude sense. There is no reason to believe that the proportions would have been radically altered had every adult individual in the area been measured.

Technique of measuring and observing followed that taught by Professor E. A. Hooton of Harvard University, and the recording was done on field blanks used by the Division of Anthropology of Harvard University. Head height was taken with the anthropometer, measuring from tragion to the top of the head. Recorders were Cedric Farnum, my guide, and Mr. S. Morgan Hills of Hartford, Connecticut, my companion during the last three months in the Barama country. The von Luschan porcelain color chart was used in determining skin color. The statistical computations on the raw data were done in the Harvard Anthropometric Labora-

[1] See Plates 27–30 for pictures of Carib physical types.

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

THE BARAMA RIVER CARIBS OF GUYANA RESTUDIED: FORTY YEARS OF CULTURAL ADAPTATION AND POPULATION CHANGE

Abstract

by

KATHLEEN J. ADAMS

121 175 [361] [659] The Caribs of the Upper Barama River drainage basin in the North West District of Guyana are restudied. About forty years ago, this population practiced a semi-nomadic adaptation to the rain forest. Now these Caribs benefit from national medical programs and participate in regional markets for labor and local commodities. 121 +179 The Upper Barama River Carib population is investigated for changes over time in aspects of its behavioral patterns which have affected its size, distribution, and organization relative to resources available in the natural and social environments. Regional influences are examined, and analyses are made of productive activities and patterns of sharing and direct exchange as this small, relatively isolated population has been integrated into a national political economy.

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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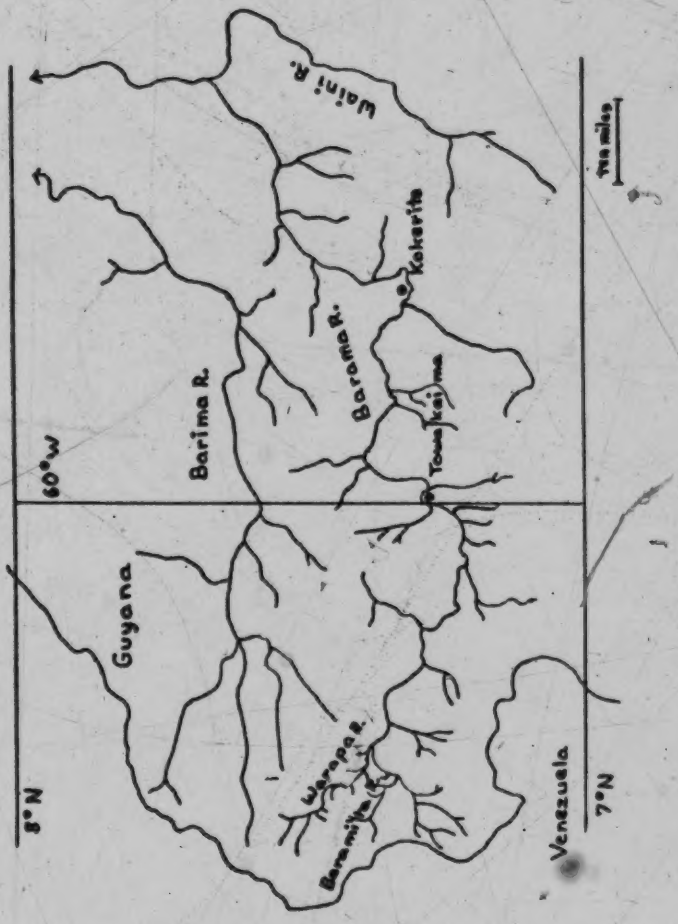

Figure 2. The Barama River.

000 future use.

*177 182 As is evident from these data, the dependence on local biotic resources has not remained constant. For the most part, the introduction of iron technology, guns, and new cultigens has not greatly changed the patterns of exploitation of biotic resources. However, cultural changes brought about by the local availability of regional resources have had consequences in the degree to which the forest flora and fauna are exploited as well as the extent of the manipulation of cultigen communities. The history of these external resources may be summarized as follows.

Regional Contacts and External Resources

• 361 *177 The scattered Carib settlements reported by Gillin (1936) along the length of the Upper Barama River have been abandoned. Amerindians have been attracted by enclaves of introduced economies where new resources are available. In the Upper Barama River area, gold mining [659] activities and later a government settlement project have involved the local population. Also, Caribs have migrated out of the Upper 166 Barama River drainage basin. Groups of Amerindians have gone to Matthew's Ridge, others to the Cuyuni River.[1]

*177 121 More specifically, this study concerns the succession of regional influences and the resultant human adaptations in the Upper Barama River area. These external resources which have affected the local population size and social organization have reached the Upper Barama River Caribs through two channels. Some have come as public services [659] available to Amerindians through various governmental agents. Other 000

175 co-opt the permanent exchange relationships which Baird had already
*177 established. The missionaries' greatest success had been with those
997 few people living at the Air Strip who were not immediately affected by the local mining economy. Furthermore, Baird, with his long standing allegiance to Guyanese nationalism, had always acted as the emissary for the Government in the region. In contrast, the American missionaries operated internationally in the promotion of their own interests. Clearly, Baird was the obvious choice for government
(648) support in this strategic frontier outpost close to the Venezuelan border, particularly since 1962 when Venezuela reopened a border dispute along the North West District.[4]

175 International events have made the remote Upper Barama River area
*177 strategic to Guyana's national development. In order to secure the
659 hinterland, programs have been designed to tie these areas to the national political economy. In the Upper Barama area, this goal has been implemented by a settlement project at Baramita Air Strip.

The Baramita Air Strip Settlement

175 Late in 1969, Baird ceased mining operations altogether. His
*177 imminent withdrawal from the area would have left many impoverished Amerindians exposed to the potential of Venezuelan influence. It was also important not to abandon the air strip close to the Venezuelan frontier for other than Guyanese use. Thus, government
*177 programs were introduced with new resources administrated by new
175 personnel. Baird moved to Baramita Air Strip where he assumed a
659 salaried position as Project Officer in the Department of Interior
361

*177 Development. The Amerindians who had previously worked for him quit
175 their settlements around the mine and followed Baird to the air strip.
657 In Time, Baird's mine, was left derelect; the era of gold activities
• 361 was ended. Resource opportunities in the area now tend to be concentrated at the air strip, and the Caribs have nucleated around them.

*177 To some extent, government programs and services had reached
175 these Amerindians before the creation of the Baramita Air Strip
657 community. Due to the remoteness of the area, the Aboriginal Indians Protection Ordinance of 1910 little affected the Upper Barama River Caribs. Likewise, the government policy of Amerindian integration expressed in the Amerindian Ordinance of 1951 did not directly affect these Caribs either until recently. The extension of health services and participation in national elections have already been mentioned. Since 1960 , a malaria eradication program has been conducted in the area. This includes testing the population with blood smears, distributing salt medicated with chloroquine, and spraying habitations with DDT. Also, at various times, health teams were sent into the bush to treat epidemics. Individuals too sick to benefit from locally available care have been sent by plane to public health facilities in Georgetown. However, in addition to these measures, aid for more moderate disabilities and preventive health care were added with a resident Medical Ranger.

*177 Health services, a government school, markets for crops, and
657 agricultural assistance are now locally available. A Medical Ranger, an Agricultural Field Assistant, and a School Master are in residence. A doctor holds a clinic once a month at the Air Strip. All of these

*177 659 facilities for local community development have been introduced in the period of a few months. The structure through which they are available is diagrammed in Figure 3. Baird's autonomous position as a gold miner has changed. As Project Officer, he is now responsible for locally implementing government programs and supervising facilities that cut across the responsibilities of several Ministries. These include the Ministry of Health, Ministry of Education, Ministry of Agricultural and Natural Resources, and Ministry of Local Government. In addition to his position in the Interior Development Department, Baird is also an agent for the Post Office Department, Civil Aviation, and Guyana Airways Corporation. By July 1970, the

*177 • 361 Barasnita Air Strip community was established. Two new buildings constructed along the air strip to house government personnel add to the appearance of a settlement.

*177 622 [66] In addition to these services for the population, the Ministry of Local Government has provided for the development of local Amerindian leadership. As with all Amerindian populations in the interior, local elections are held. The first occurred in the Upper Barama River area at In Time in October 1967. A second election was held at the air strip in October 1971. A Captain and three Councillors are chosen. The Captaincy is a salaried position; councillorship is not. Thus, one more source of external resources is available to this population.

*177 175 423 657 The question of local land tenure also has received government attention. However, the Amerindian request for land titles occurred without the participation of the Upper Barama River Caribs who have

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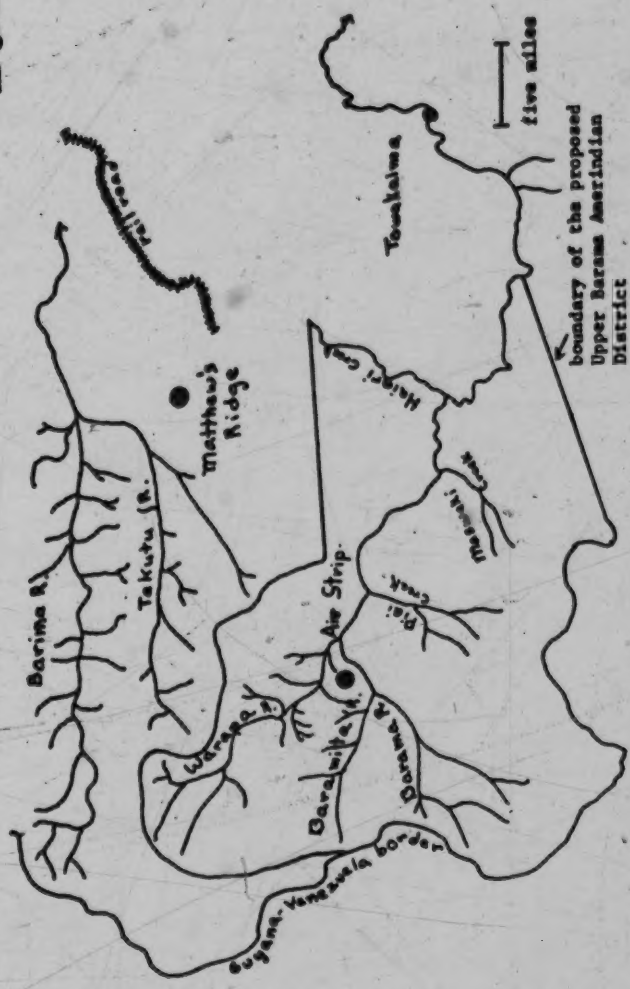

Figure 4. Proposed Amerindian District in the Upper Barama River Area.

162
602 population are related in some manner.

In addition to a generational continuity of the human group
175
501 involved, there has also been a continuity in interaction. That is,
166 during the period under consideration, material exchanges and the migrations of individuals among Carib settlements in the Upper Barama area have been more pronounced than such exchanges with outside settlements. This permits the Upper Barama Caribs to be
[121] identified as a single adapting population for the purpose of this
*179 analysis (Rappaport 1969:184). However, the frequency of contacts
• 361 and the nature of movements among settlements have changed. Specifically, small, dispersed, semi-nomadic social units have given way to nucleations around centers where external resources are available. In this context, different settlement patterns would appear to represent different adaptations devised by the same group of people
[161] to meet differing conditions. Differing rates of population growth also would appear to be the result of the changing circumstances.

Settlement Pattern

175
161 During 1932-33, Gillin estimates a Carib population of not more
361 than 600 for the entire Barama River area (1936:113). In all, thirty-three settlements were located along the Barama River (1936: 110). About ten[3] were above Towakaima (see Figure 6). This includes the Savari[4] settlement for which more complete population data were
175 recorded. The population for this settlement consisted of forty-seven
161 individuals (1936:110). Since the primary adaptation was to the rain
162 forest, there were no reported concentrations of population in the
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(1932-1971) Barama River

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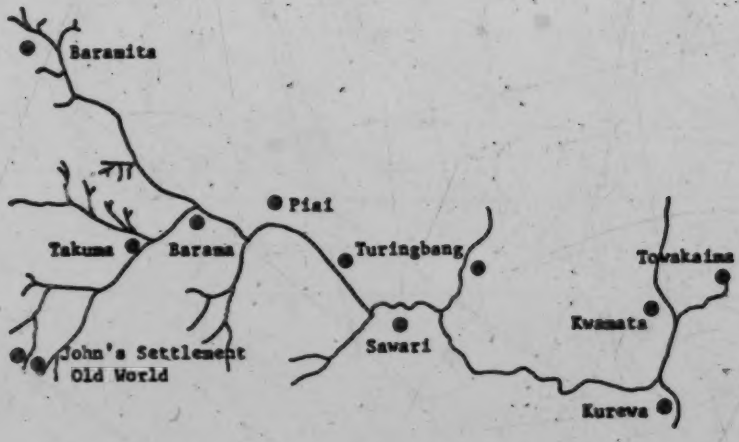

Figure 6. Map of Settlements,* 1932-33 (after Gillin 1936:2).

*Data are not available on the population sizes of these settlements. Individuals in settlements fluctuated between fifteen to fifty in number (Gillin 1934:333).

[162]

175 Upper Barama area. Rather, the settlements were dispersed along the
161 river corridor and varied in population size from fifteen to fifty
162 individuals (1934:333).[5] The Carib settlements were named for the
361 creek they were near (1936:98), and house structures were located in
[103] the cultivated fields. Thus, locations fluctuated around a creek as
well as among creeks. Accordingly, ten inhabited settlements in the
Upper Barama River area could be estimated to represent a population
[126] of perhaps 200. This number is also supported by geneaologies
recorded in 1970-71.

175 With respect to interactions among these settlements in the Upper
628 Barama River area, Gillin reports that the residents of Savari were
in contact with Haiari, Kwamata, and Kureva (1936:106). He also
reports that this group of Caribs was "completely out of touch with
those farther up the river" (1936:106).

Subsequent inquiry reveals this may not have been the case.[6]
Verbal communication as well as a recognition of kinship relation-
ships seem to have been maintained throughout the Upper Barama River
area during this early period. In 1970-71, one informant remembers
that as a small boy he accompanied an adult male relative on a walk
from one of the settlements in the upper section of the Upper Barama
*[177] River to visit other relatives in Savari. They were lured by news
of the white man (Gillin) living there and curious enough to go and
see for themselves. However, when they reached Savari, Gillin was
in Georgetown. The travelers had to content themselves with a close
examination of all the camp gear.

Contacts among the Carib settlements on the lower section of the

175 628 Upper Barama seem to have been more frequent than contacts among the Carib settlements in the upper section of the Upper Barama. However, it is also apparent that the most immediate external contacts each group of settlements had were with each other.

In 1932-33, the frequency of contacts seems to have been relative to distance. That is, no specialized settlements are reported in respect to seasonal or other activities. All Carib settlements seem 175 • 361 [582] to have been much alike in their dependence on the rain forest. The bush resources relied upon include predominantly territorial animals and widely dispersed plant species. Desirable land for cultivation, a mixture of sand and clay on a hillside in close proximity to a permanent stream, was limited (Gillin 1936:14). As a consequence, settlements are widely scattered. Figure 7 depicts the dispersed nature of Carib settlements in the Upper Barama River area for this earlier time period. Realignments would occur with the relocation of settlements. After a number of years, a move might be made to more advantageous hunting and gathering and more fertile soil. Other cultural practices as well promoted this scattered, shifting pattern [586] [572] of settlement. A divorce tended to result in the relocation of individuals (Gillin 1936:79-80): the rupture of male friendships, in [775] [768] the relocation of households (1936:136). Also, due to a belief in the malevolent nature of a person's spirit, a clearing would be abandoned in the event of a death (Gillin 1936:165).

175 *177 361 Later, with the availability of external resources, settlements were no longer scattered solely along the Barama River corridor. Over time, a centralization of settlements developed in relationship

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2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
~ (1932-1971) Barama River

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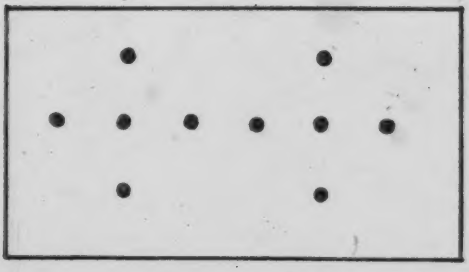

Figure 7. Dispersion of Settlements along River Corridor, 1932-33.

175 to employment opportunities. Around the mine In Time, a nucleation
*177 of population is clearly evident. The settlements further away from
• 361 the mine were the first abandoned. Many of these people left for Matthew's Ridge or the Cuyuni River. However, the employment and market opportunities at In Time attracted and supported the largest portion of the local Carib population.

*177 The permanent workers at In Time had no large farms. They resided
175 close to the mine and bought provisions. There were two of these
361 residential groupings, one around the mine and one at Big Creek. In
162 the spring of 1969, there were 103 residents near the mine and sixty-eight at Big Creek. Also, three satellite settlements dependent on frequent opportunities to sell provisions and occasional employment were located less than ten miles away from the mine. These were Aranka with a population of ninety and Baramita[7] with forty-seven (see Figure 8). In addition, fifty-three people were located at Baramita Air Strip itself. By this time the declining activities at the mine and the limited opportunities provided by the missionaries attracted some people to the Air Strip. The remaining population was located in more remote settlements including thirty-nine at Pisi Creek, thirty-six at Korotoko, thirty-four at Barama Head, twenty-nine at Korisho, and five at Masvakai.[8] The average population size of
[161] these more remote settlements was about thirty-five people.[9] Thus, the total population was 504.

*177 It must be noted that the Amerindian Captain has been active in
175 attempting to settle Carib people at the Air Strip. In 1969 he had
361 a measure of success among the 119 Caribs from the five settlements
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[TEXT CONTINUED ON PAGE 46]

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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Figure 8. Map of Settlements, 1969.

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

TABLE 4

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POPULATION OF SETTLEMENTS, 1969

In Time	103
Big Creek	68
Aranka	90
Baramita	47
Baramita Air Strip	53
Piai	39
Korotoko	36
Barama Head	34
Karisho	29
Maswakai	5*
Total	504

*This number had been recently depleted by 32. These people along with the entire population of Anama, 32, and 19 from In Time had gone to Matthew's Ridge.

[166]

175 in the headwaters of the Barima River. He was able to convince
*177 several men from Cedar, one of the settlements, to cut a communal
• 361 farm at Black Water Creek, about two miles north of the air strip.
622 For a time, twenty-four people from Cedar were living there. Later, they went back to Cedar, only sporadically returning to camp out for a few days or so to make use of the facilities at the Air Strip. It is clear that this smaller Carib population from the headwaters of the Barima River remains peripheral in an analysis of cultural change among the Upper Barama River Caribs.

*177 Figure 9 summarizes the settlement pattern in the Upper Barama
175 area in 1969. The greatest nucleation of population occurred in
361 zone a. There, 171 people were directly supported by mining activi-
464 ties at In Time. In zone b, the larger but more dispersed population of 190 was more indirectly involved in the mining economy. Lastly, the remaining population of 143 was dispersed in five more independent settlements in the rain forest. Settlements are varied in purpose. However, the Upper Barama River Caribs as yet do not have two or more house sites where they engage in different activities.
[657] This occurs with the introduction of government programs and services at Baramita Air Strip.

*177 During 1970-71, the population located in the Upper Barama River
361 area was centralized in varying degrees around Baramita Air Strip
162 (see Figure 10). In the summer of 1971, there were 333 residents at the Air Strip. Of this number, 232 are permanent residents. The remainder are mobile, part-time residents who also maintain farms in the more remote settlements. Also in the spring of 1971, Aranka had

[TEXT CONTINUED ON PAGE 50]

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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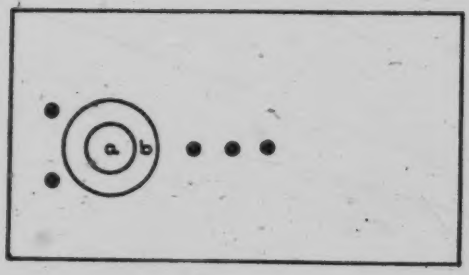

Figure 9. Partial Centralization of Settlements around Mine, 1969.

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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*177
• 361

Figure 10. Map of Settlements, 1970-71.

TABLE 5

• 361
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POPULATION OF SETTLEMENTS, 1970-71

Baramita Air Strip	333
Aranka	114
Baramita	69
Total	351*

*This number includes the old man and woman at Piai.

*177 a population of 114 and Baramita sixty-nine. These two settlements
• 361 also have mobile residents who have access to farms in still more
162 remote areas. The latter include thirty-five inhabitants.[10] In
[161] total, there were 551 Carib people in the Upper Barama River area in 1971.

*177 Increasingly, the practice of abandoning a house site in the case
768 of a death is being neglected. A cemetery some distance away is
[764] being used at the Air Strip. Several older graves around house sites are disregarded. Apparently, priorities of location override this tradition.

*177 Figure 11 shows the current settlement pattern. Both zone a and
361 b have permanent residents. Zone c residents also make use of farms in either zone a or b. There is little direct movement between zone a and b. The partial centralization of population initiated by the local mining economy has been completed. Within the existing nucleation, the center has been changed from the mine to the air strip. The remaining population has been drawn into this locus. In contrast to the limited opportunities available at the mine, some of the
[657] opportunities at the Air Strip are public. That is, they are available to all Caribs. These new resources are the clinic, the school,
[464] and agricultural assistance. However, very few employment opportuni-
[241] ties are available at Baramita Air Strip. Bush farms must be maintained and returned to in the case of the permanent workers who had left aside subsistence in the rain forest.

Consequently, a pattern of dual residence appears to be emerging in response to resource development. The local Carib population has

[TEXT CONTINUED ON PAGE 52]

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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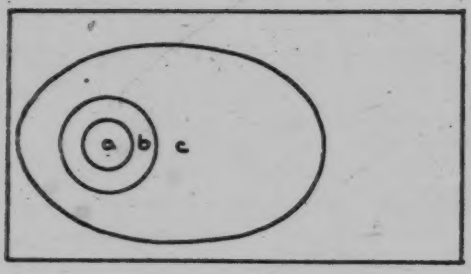

Figure 11. Completed Centralization of Settlements around Baramita Air Strip, 1970-71.

centralized to make use of the government programs and services available at the Air Strip as well as maintain an advantageous subsistence relationship to the rain forest. From the preliminary data available on the resettlement around Baramita Air Strip, a dual pattern of residence is evident only in respect to those people who have moved in from the more remote settlements. To some extent, this pattern reflects the several months required to develop a productive farm in a new location while relying on an established farm. As yet, permanent residents of the Air Strip and the two satellite settlements of Aranka and Baramita have not cut fields in the more remote areas. The further development of a pattern of dual residence will depend on persistence in the extent and nature of regional networks of exchange at Baramita Air Strip.

At the present time, the aggregation of people at the Air Strip plus those in the satellite settlements have put a burden on the local resources in the immediate area. With regard to hunting and gathering, greater effort is given for meager results around the Air Strip so that longer trips must be made. Also, the higher, dry land suitable for an air strip does not provide a reliable water source during the dry seasons. People must dig in the dry stream beds and at times have temporarily moved and camped out on the banks of the Barama River until rain came again. House structures continue to be located inside cultivated fields, and large tracts of land have been opened up around the air strip.

A survey completed in late spring 1971 revealed that 140 acres of bush had been cut for farms around the air strip. To avoid disputes,

241 311 *177 agreements are made concerning the direction particular men will move in cutting down bush for new fields. Land which would traditionally be regarded as unsuitable for farming is being used. Increasing land areas are being exposed and, thus, the potential for extensive land deterioration exists. The ultimate impact of these activities by 551 people within fifty square miles of bush cannot be completely related in that the data available disclose the effect of only the first year of this more centralized settlement pattern.

• 361 *177 In conclusion, among the Upper Barama River Carib population, the capacity for transience has been differently adapted to the succession of resource situations. The first settlement pattern was an adaptation in a position of relative isolation in the rain forest. In response to the dispersed nature of local subsistence resources, the Carib population was dispersed in settlements along the river system. These settlements fluctuated in population size, and there is evidence [628] to suggest that personnel exchanges were more frequent within two groups of people, one located in the upper section and the other in the lower section of the Upper Barama River corridor. In any event, this was changed with regional contacts and exchange opportunities. A nucleation of the local population has emerged in response to the introduction of centers of external resources, the mine and the air strip. [464] At the mine, employment was available to only a portion of the Carib population. The remainder of the population maintained a subsistence in the bush, although incorporating occasional market opportunities at the mine. The mobility of the unemployed population in the satellite settlements of Aranka and Baramita, and perhaps the

• 361 *177 more remote settlements, was somewhat checked by these markets for local commodities and temporary employment. In order to make use of the government programs and services and yet escape the diminished hunting and gathering opportunities, a pattern of dual residence appears to be emerging with the complete centralization of the Carib population around Baramita Air Strip.

Demographic Features

162 Attending these changes in settlement pattern are changes in population size and age structure. The Upper Barama River Caribs have not been an isolated reproductive population. Although both males and females have left the population, only males have joined it. Thus, for the time period under consideration, the reproductive potential of the females remaining in the population has been realised within the Upper Barama River area. Although the current population does not represent the total reproductive experience of the 1932-33 population, it can serve to give insight into the nature of the increase in population size.

121 16 It has been noted that the size of human populations is regulated by cultural practices (Loriner 1954; Nag 1962) as well as physiological factors (Stott 1962). The present analysis addresses variations in the size of one population adapting to changing environmental conditions. This approach does not lack precedence (Wagley *177 1951; Hinshaw, Fyeatt, Habicht 1972). However, in this case data 162 from different time periods are available on a single, relatively small population. The change in size from about 200 to 551 can be

146 common among all children in the age range from about eighteen months
[142] to four years. These children no longer nurse and yet are not old enough to effectively gather casual protein and other foods on their
[597] own. However, if a family's subsistence crisis becomes extended, a child in this age range may be given up for adoption, usually by a family of immediate kinsmen. Three cases of such adoption recently occurred among the segment of the population at the Air Strip. Consequently, the protein deprivation of children was not sufficient to
146 165 cause any deaths during August 1970 to July 1971. For this period, two deaths occurred in the total population. Both were in the age category of over sixty-five.

*177 Clearly, health programs cannot be held responsible for any major
161 changes in population size which occurred before 1960. Health care
657 has been introduced only in the last years and certainly has influenced
[165] the mortality rate of infants and others. Nevertheless, the change in the pattern of reproduction occurred previous to these health measures, as will be apparent from data collected among the population in question during 1970-71.

162 During 1971, there were 551 Caribs in the Upper Barama River
• 361 drainage basin. This number includes 280 males and 271 females. The age structure and sex composition for the total population are presented in Table 7. Table 8 reports the age structure and sex composition for the segment of the population at Baramita Air Strip; Table 9, for the remaining population in the satellite settlements.

162 As is clear, 264 or 47.9 percent of the total population is under
*177 ten years of age. Also, it is apparent that this larger proportion

[TEXT CONTINUED ON PAGE 65]

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

TABLE 8

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AGE STRUCTURE AND SEX COMPOSITION
OF BARAMITA AIR STRIP POPULATION, 1971

	male	percent of total male	female	percent of total female
70-74	1	.6	1	.6
65-69	2	1.1	2	1.3
60-64	5	2.9	1	.6
55-59	5	2.9	3	1.9
50-54	2	1.1	1	.6
45-49	4	2.3	3	1.9
40-44	4	2.3	9	5.7
35-39	4	2.3	6	3.8
30-34	3	1.7	8	5.0
25-29	16	9.2	15	9.4
20-24	11	6.3	13	8.2
15-19	13	7.5	16	10.1
10-14	17	9.8	21	13.2
5-9	33	19.0	22	13.8
0-4	54	31.1	38	23.9
Totals	174		159	
[161] Complete Population Total		333		

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

TABLE 9

AGE STRUCTURE AND SEX COMPOSITION
FOR SATELLITE SETTLEMENTS POPULATION, 1971

162
• 361

	male	percent of total male	female	percent of total female
75 and over	1	.9	1	.9
70-74	1	.9	0	0
65-69	1	.9	1	.9
60-64	0	0	1	.9
55-59	0	0	0	0
50-54	4	3.8	0	0
45-49	3	2.8	6	5.4
40-44	1	.9	2	1.8
35-39	6	5.7	7	6.2
30-34	0	0	9	8.0
25-29	5	4.7	4	3.6
20-24	12	11.3	9	8.0
15-19	7	6.6	8	7.1
10-14	8	7.5	4	3.6
5-9	22	20.8	16	14.3
0-4	35	33.0	44	39.3
Totals	106		112	

Complete Population Total 218

NOTES

175 162 114 [173] [1]It is improbable that the exact history of the current Upper Barama River Carib population can be established. Schomburgk, during his surveying of the North West District in the 1840's, found Akawai as well as Carib settlements on the Barama River (1848:359-363). Gillin, of course, found only Carib settlements in 1932-33 and suggests that the Caribs usurped the Akawai position in the area. Gillin records a local tradition that the first Carib ancestors migrated from around the head of the Corentyne River to the Barama River and concludes that the ancestors of the Carib population had been in the area only for about 200 years (1936:113).

162 166 [173] During the 1970-71 field work, it was discovered that several male Carib ancestors with significant numbers of offspring in the current population had migrated into the Upper Barama River area from the Pomeroon River area. Some had done this to escape the widespread influenza epidemic after World War I. Also, at least some Caribs currently maintain that according to tradition, the first ancestors to populate the Upper Barama River area came either from Venezuela or the Cuyuni River area. In any case, the question of these origins does not pertain to the analysis being developed.

000 [551] [2]Carib nicknames remain in use (Gillin 1936:77-78). Individuals guard the privacy of these names to different degrees. Western names are also used. In addition to a chosen first name, the father's first name is usually taken as a last name. Thus Manuel Jacob's son is called Francis Manuel.

[103] [3]In addition to nine obvious Carib settlements in the Upper Barama River area, Gillin includes the location of "John's Settlement" and "Old World" with no indication of their nature (1936:2). Their names highly suggest mining camps of some sort.

Also, Gillin reports the abandonment of two settlements, Massevah (same as Masvakai) and Korotoko (1936:125,135), which were subsequently reinhabited. In consideration of all of these factors, the estimated figure of ten inhabited settlements appears to be appropriate.

[103] [4]The Upper Barama River Caribs explain that the Carib name for this settlement is Sewalipialu and that the abbreviation Sawari is used with non-Carib people. The shorter name, consistent with Gillin's usage, is maintained here.

[5]Gillin later revises this estimated range to seven to seventy individuals (1936:98), but the first more conservative estimate of settlement size appears to be more appropriate for the Carib settlements in the Upper Barama River area.

[36] [103] [197] [6]It must be pointed out that the Carib people recognize a distinction between the group of settlements in the upper section and the lower section of the Upper Barama River. They refer to the former as Barama Top Side and the latter as Barama Bottom Side and claim

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a difference in language spoken by these two groups of people. However, all such Carib language distinctions are being rapidly lost as the language is undergoing modification with the increased centralization of the population and reliance on English.

[7]Baramita and Baramita Air Strip are two separate settlements.

[8]This number was depleted by thirty-two. These people recently had gone to Matthew's Ridge. Also, the entire population of Anama, thirty-two persons, had gone with them. At this time, nineteen from In Time had gone to Matthew's Ridge as well.

[166] [9]This common size may represent a decrease in the mobility of the Carib population among different remote settlements as reported by Gillin.

[10]An old man and wife, too decrepit to travel, were located at Piai.

[127] [11]Data for this necessarily diachronic perspective on the population sizes are available from a variety of sources. These include Gillin's census data (1936), government census estimates and records, reports of the Malaria Eradication Programme, voting registration lists, and population data collected in the Upper Barama River area during the 1970-71 field work. The diversity of these quantitative [163] reports presents several problems. First of all, the Caribs do not record their birth dates. Nor do they place any emphasis on remembering how old any individual is. Consequently, all recorded ages are estimates made by the observer. Some age data were collected by the nominal categories of adult and child. Furthermore, with varying purposes for collecting population data, territorial units have not been consistent. In different enumerations the Upper Barama River area has been aggregated with portions of adjacent territory. Although these data limitations underscore the conditions of less than laboratory control involved in studying human behavioral adaptations, they do not preclude inquiry.

[184] [12]Among the Carib women at Baramita Air Strip this pattern appears to be particular to each woman and not related to seasons or other cyclical events.

Kloos reports a similar pattern for the interval between births for the Maroni River Caribs of Surinam. In this instance, women are tending to reproduce a child every thirty months over a period of thirty years (1971:102).

[845] [13]Of course, this calculation does not account for twins or other multiple births. Among the Carib women at Baramita Air Strip, two have given birth to twins which are discriminated against in no way.

candidates who were unemployed at the time, one man was selected by the largest number of votes to serve as Captain for a four-year term. Other candidates for the Captaincy became Councillors. Of these offices, only the Captaincy is a salaried position. It receives $150 a month.[4] The duties of these offices, which have been more clearly defined with the government settlement project at Baramita Air Strip, have provided a basis for the redistribution of the Captain's salary to a wider section of the population. However, the office of Captain among the Upper Barama River Caribs does not differentiate the officeholder in any sustained fashion from the rest of the population. Similar to other forms of local employment in the Upper Barama River area, the Captaincy is not a vehicle to gain a control in regional markets or to accumulate deployable forms of capital.

Previous to the establishment of the mining companies, the dispersed Carib settlements tended to be closed with regard to obtaining and sharing local subsistence resources. This pattern was apparently little disturbed by the first trade goods brought by the mobile porknockers. However, the money economy and the centralized channels of regional exchange introduced by the mining companies markedly altered Carib subsistence. External resources came to be critical to the subsistence patterns of the expanding local population, and settlements became more centralized around their source. In 1969, Baird's mining activities were directly supporting 171 individuals or 33.9 percent of the total Carib population at the time. Located nearby at Baramita, Aranka, and the Air Strip, another 190 individuals

or 37.7 percent of the total population frequently sold provisions at the trade store. This segment of the population also participated in the ancillary regional exchange networks provided by the missionaries and the Amerindian Captain. The remaining 28.4 percent of the population, the 143 individuals in the more remote settlements, made more infrequent trips to the trade store at In Time. Either through informal trade among Caribs themselves or the centralized channels created by the trade store, mining activities involved the entire local population in a common network of regional exchanges. In turn, this network was changed by the abandonment of In Time.

Regional Exchanges Centralized at Baramita Air Strip

The cessation of mining activities late in 1969 again altered the subsistence patterns of the local Carib population. That segment of the population dependent on employment at the mine and maintaining no farms was faced with a subsistence crisis. The opportunities for the remainder of the population to sell provisions was greatly reduced. During the spring and summer of 1970, the Government began introducing programs and services to sustain this population. The new governmental offices have already been detailed (see Figure 3). The resources conveyed to the population through these new channels remain to be discussed. As data are available only for the first year of these new programs at Baramita Air Strip, this must remain a preliminary report.

The first year at the Air Strip was one of general parsimony. Job specialization among the Caribs was almost eliminated and everyone returned to rain forest subsistence.

returned to rain forest subsistence. There was no household without a large farm, but it was some time before new farms became productive. In addition, all of the Carib men were anxious to gain some money income to buy commercial items they had come to consider a need. However, there were few employment opportunities and the demand for local products was very limited. Although maintaining a subsistence relationship to the rain forest, the population nucleated around the air strip as much as possible to make use of the few remaining resource opportunities, including health care, food programs at the school, and whatever was available by way of casual wage work.

More men sought work than that available. Government station hands were hired. Work involved carpentry, cutting grass, filling water tanks during the dry seasons and other tasks. For a time, four men had these jobs. By spring 1971, only one man was left in this employment. Also, occasionally men were hired on project work, including stumping out areas, lopping down secondary bush at the extreme ends of the air strip, and building a clinic under one of the government residence houses. The pay for this work was about $4 a day, and the work schedule was from 6:30 A.M. to 2:30 P.M., allowing the men time to farm or hunt during daylight hours.

Baird's private activities also entailed some employment opportunities. He was considering a partnership which would take him to the Potaro River for gold mining. He made a three week prospecting trip there in November 1970 and took along six of his former workers.

Other opportunities for work at the Air Strip involved carrying loads for the Medical Ranger and the Agricultural Field Assistant.

NOTES

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[43] [1]Although the market opportunities have been limited in the Upper Barama River area, they are not much improved at either the Cuyuni River or Matthew's Ridge where segments of the population have gone. Matthew's Ridge, a mining settlement with single men from the coast, is viewed as a particularly predatory environment by the Carib men, [593] especially those with more than one wife. Men are wary to take their wives along and equally wary to leave them unattended anywhere else. [361] As external resources have gathered this dispersed population a substantial number has elected to remain in the Upper Barama River area and organize around the sources of opportunity there.

[435] [556] [2]A rifle costs about $150 and a license must be obtained.

[3]Guyana became an independent nation in 1966.

[4]Amerindian Captains' salaries are based on population size. The Upper Barama River Carib Captain receives the highest salary which is for a population of over 500.

[465] [5]In addition, food was distributed to settle a request of a year's standing that payment be made to fifteen men who had helped clear the sites for the government buildings at the Air Strip. Other government subventions reached this Carib population. At [747] Christmas and other times, care packages from the Canadian Red Cross were sent into Baramita Air Strip by the Amerindian Welfare Officer and contained clothes, school items, toys, and powdered milk.

[436] [6]This figure included 6¢ a pound for bananas and plantains and 3 1/2¢ a pound for apple bananas.

broker between them. At times, rivalry was evident when a worker had been suspended for two weeks, as was the standard practice for failure to turn out for a scheduled work period. The suspended man would have his wife make a batch of cassiri, and he would hold a spree for other miners who often suspected the plot but could not resist the invitation. In turn, the guests would be too inebriated to work, and the first miner would be immediately reinstated as constant workers were needed to maintain the mining enterprise.

From the pattern of social organization attending subsistence farming in the rain forest, father and son and father and son-in-law ties have been solidified by strategies to secure employment. In this case, previous nuclear families with ties of assistance among a wider kin group, effective organization for exploiting the bush, were changed by the circumstances of the availability of employment. However, the record of impermanence regarding work opportunities and other markets has contributed to a general lack of explicitness regarding work partnerships and residential practices among the Upper Barama River Carib population during the last forty years. The organization of the population with no access to steady mining employment also has been affected by the increased availability of regional exchange opportunities. This is best detailed in the discussion of the situation during 1970-71.

Resettlement around Baramita Air Strip

The current residence situation among the Upper Barama River Carib population has resulted from the pattern described by Gillin,

*177 • 361 [476] 121 the retention of father and son and son-in-law bonds among workers, as well as by the centralization around the air strip. Temporary cooperation to aid relatives in settling in a new location is also a factor in the current residence situation. At this time little analysis can be made of the life cycles of family groups or of individuals. Data are available only on the first year of the resettlement around the air strip, a time of considerable change in the extent and nature of the external resources available in the Upper Barama River area. Family organization is responding to these new circumstances.

*177 464 The population in the satellite settlements, Baramita and Aranka, has had a different experience with the regional economy. Among these segments of the population, men have had little or no employment. The headman of Aranka worked about five separate one-year periods in his youth with porknockers. Another man from Aranka worked for two years at In Time while living with his father. Now he is one of the headman's sons-in-law. Also, men from Aranka have been employed from time to time by the Malaria Eradication Officer. For the most part, the populations in these settlements have maintained a subsistence adaptation to the rain forest. Their livelihoods have been supplemented by selling small amounts of local provisions for commercial items at the trade store. [438]

*177 592 621 The residence patterns in these satellite settlements are somewhat different and they also differ from that characteristic of the households at the Air Strip. At Baramita in 1971, there were five clearings. One was inhabited by a man and wife and their children. Two others were nuclear families recently extended by the addition of

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

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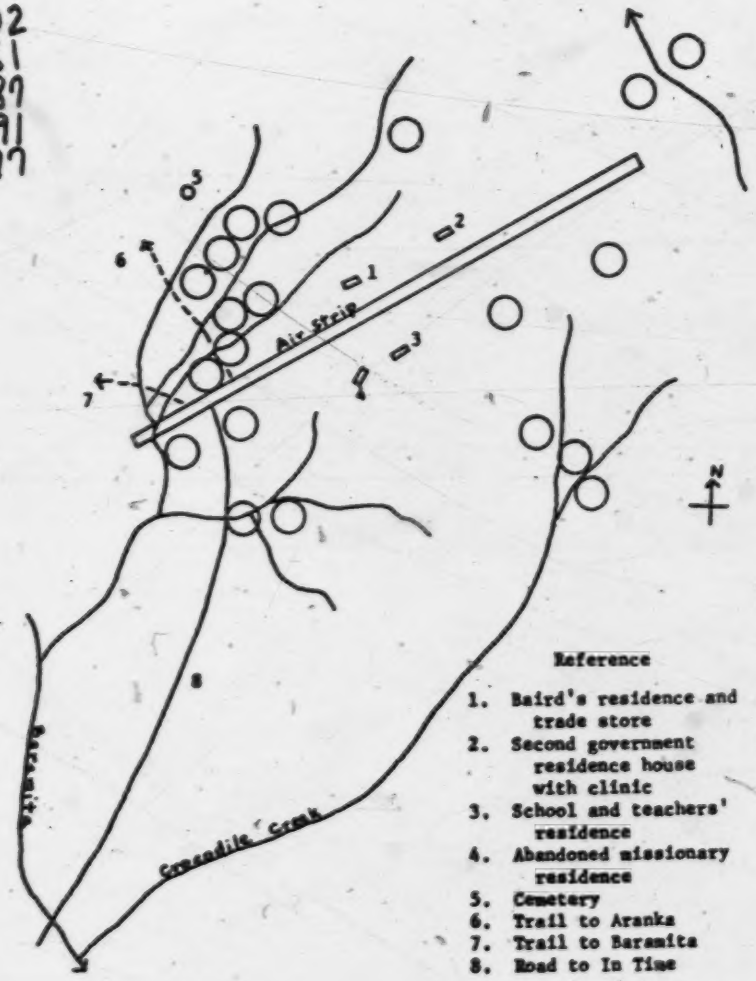

Reference

1. Baird's residence and trade store
2. Second government residence house with clinic
3. School and teachers' residence
4. Abandoned missionary residence
5. Cemetery
6. Trail to Aranka
7. Trail to Baramita
8. Road to In Time

Figure 13. Sketch Map of Baramita Air Strip Settlement.

Carib clearing = ○

and as others moved to the Air Strip, the prominent Councillor was a pronounced source of agricultural assistance. At one time or another, he helped all households that moved to the Air Strip. To those who requested it, he would give a wolisha (a large basket for carrying loads on the back) of manioc tubers or processed cassava cakes. Clearly, the Councillor was not providing a major portion of subsistence for anyone outside his household. Yet, he was a source of temporary relief during a time when farms were not yet productive and other sources of subsistence foods were scarce. Also, the Councillor made available manioc stalks necessary for planting new fields. Partly as a consequence of these activities, the prominent Councillor was elected as Captain during the second local election held at the Air Strip in October 1971.

As he is a long time resident of the Air Strip and had expanded his already established agricultural fields, the Councillor was able to make allegiances among the population in this manner. During the spring of 1971, he had 16.2 acres under cultivation compared to the incumbent Captain's farms, which amounted to 11.3 acres. This contrasts to 5.8 acres which was the average size of the cultivated fields of the remaining eighteen clearings at the Air Strip. However, this does not represent any sustained differential relationship to local resources. Agricultural fields are not exchanged. Rather, land holding is determined by the labor invested to develop it and remains a resource until it is reclaimed by the forest.[6]

Over time, the size and stability of Carib settlements have changed. Increasingly, the population has centralized around sources of external resources.

energy characteristic of this environment. Slash-and-burn cultivation is a replication of the rain forest, and in this manner, human groups do not extend their niche through agriculture but rather integrate food production with the extant biotic community (Geertz 1963:15-28; Meggers 1971:19-21). The productivity of cultivation, hunting, fishing, and gathering were the essential components of subsistence, and the Upper Barama River Caribs, limited in population size, shifted in location as a response to these endeavors. As a consequence of this semi-nomadic adaptation, the largest social unit was the settlement, within which the sharing of resources and the exchange of labor were patterned.

In contrast, wage labor and other regional markets and modern medical technology have combined to expand the niche of the Upper Barama River Carib population. In turn, population size has expanded. At the time of Gillin's (1936) study in 1932-33, the Upper Barama River Caribs numbered about 200 and were located in dispersed settlements along the river corridor. There are now more than 550 Caribs nucleated around Baramita Air Strip. This increase in size has been achieved despite losses due to migration. The current rate of increase is about eight percent annually. Coupled with a low death rate, this is indicative of the potential for further increases among this population. Using population size as the coefficient of adaptation as proposed by Alland (1967, 1970), clearly a successful adjustment has been made to the new resources available over the short term generation-to-generation time span.

In this context, any projections for either the future of the